

REMARKS

In the action of May 3, 2005, the examiner rejected claims 1-3, 6 and 7 under 35 USC §102(e) as anticipated by Vasilev; rejected claims 9 and 10 under 35 USC §103 as unpatentable over Vasilev; rejected claim 4 under 35 USC §103 as unpatentable over Vasilev in view of Ruthven; and rejected claim 5 under 35 USC §103 as unpatentable over Vasilev in view of Callahan et al. Claim 8 was indicated to contain allowable subject matter.

Applicant has amended claim 1 to include the subject matter of claim 4 and also to include additional limitations concerning the size of the passageways in the rim and the relative configuration of the poppet member and the valve housing, such that substantially all of the forward flow of fluid moves through the passages in the rim portion into the interior opening of the poppet member and then out of the valve.

Applicant first objects to the examiner's combining Ruthven with Vasilev in the manner suggested; second, even if Ruthven were incorporated into Vasilev, the resulting structure would still not meet applicant's claims.

With respect to applicant's first objection, modifying Vasilev with Ruthven so that it has openings in the rim portion, such that fluid would enter radially into its poppet structure would go against a specific structural and operational characteristic of Vasilev. It is important in Vasilev that the poppet member (valve gate) 90 have a relatively tight fit within the valve housing (gate channel 88). The valve housing 88 acts as a guide for the movement of valve gate 90, so as to guarantee proper seating for the valve gate as it closes the valve. This is particularly important to Vasilev, since the Vasilev valve will operate infrequently (only a few times a year) and reliable seating of valve gate 90 is critical. If the valve gate does not seat properly, a substantial amount of pool water could be lost. If valve gate 90 is not fitted relatively tightly within the valve housing 88, the valve gate could readily tilt or become cocked during movement and not result in a good seating. The Vasilev valve, due to its construction and tight fit, is relatively slow in operation and expensive. Reliable seating is critical.

One skilled in the art, faced with applicant's problem of designing an inexpensive poppet valve, capable of reliable, high

frequency operation (see Background of the Invention), would thus not be inclined to begin with Vasilev and then change its basic structure and function with Ruthven. Reliable seating is not critical in applicant's high speed, lightweight poppet arrangement. If passages are made in the rim of the valve gate, instead of longitudinally (gate apertures 92), as taught in Vasilev, it would be necessary to increase substantially the clearance between valve gate 90 and the gate channel 88, in order to allow water to enter the passageways at an appropriate rate. Since such a modification of Vasilev would be incongruous, as discussed above. It would not be obvious to so modify Vasilev, in the absence of some specific teaching suggesting such a modification. Hence, using Ruthven alone, without such additional teaching to modify Vasilev, does not meet the guidelines of 35 USC §103.

Even if Vasilev could be properly modified under 35 USC §103 with Ruthven's teaching, the resulting structure would not operate properly as a fluid valve. According to Ruthven relative to Figure 1, fluid moves into the valve at its lower end. The pressure of the fluid moves the valve upwardly against spring 11, permitting fluid to move around the exterior of the valve body 5 within valve cage 1 and out the upper end of the valve. Openings 14 (the small radial openings) allow sand to pass out of the valve body. The Ruthven valve openings 14 are not configured to provide fluid flow through the valve. Applicant's claims now include limitations to the size of the openings and the relative configuration of the valve housing and the poppet member such that substantially all of the forward fluid flow through the valve is through the rim openings into the interior of the valve and then out of the valve. This is a substantial structural and operational difference relative to the combination of Ruthven and Vasilev. Claim 1 is thus patentable over the combination of Vasilev and Ruthven.

Since claims 2-3 and 5-10 are dependent upon claim 1, those claims are also allowable.

Accordingly, the application is in condition for allowance, and such action on the part of the examiner is respectfully requested.

This is also to request a one-month extension of time. Enclosed is the required fee of \$60. The Commissioner is authorized to charge any fees or deficiencies or credits to Deposit Account 07-1900.

Respectfully submitted,
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